Amendments To The Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An automatic exposure adjusting device, comprising:

an image sensor having a plurality of pixels, and further having an adjustment capability;

an analog to digital converter which produces a digital output comprising a plurality of bits, said digital output indicative of an output of each pixel of said image sensor;

a first counter which counts a number of overexposed parts of said digital output;

a second counter which counts a number of underexposed parts of said digital output;

a plurality of threshold detectors for comparing counting results of said first and second counters with desired thresholds;

a decision element, which ~~makes~~ is capable of making a decision to either increase ~~an~~ a next frame of exposure of said image sensor or decrease ~~an~~ a next frame of exposure of said image sensor based on a relation with said thresholds.

2. (Previously presented) A device as in claim 1, further comprising a coincidence detector, which reviews only a predetermined number of most significant bits of said digital output.

3. (Original) A device as in claim 2, wherein said first counter counts a number of pixels whose most significant bits include ones.

4. (Original) A device as in claim 3, wherein said second counter counts a number of pixels in which said most significant bit includes a zero.

5. (Original) A device as in claim 3, in which said second counter counts a number of pixels whose most significant bit includes at least one zero.

6. (Original) A device as in claim 5, wherein said threshold detectors include values indicative of what percentage of the image can have underexposed or overexposed pixels, said decision element increasing or decreasing said exposure based on said percentages.

7. (Original) A device as in claim 2, wherein there are two coincidence detectors representing relationships with two different thresholds, one of which is for an overexposed image and another of which is for an underexposed image.

8. (Original) A device as in claim 7, wherein said decision element reduces an exposure time for said overexposed image and increases the exposure time for said underexposed image.

9. (Currently Amended) A device as in claim 2, wherein there are at least three of said coincidence detectors each detecting ~~at least~~ a different one of: an overexposed image, an underexposed image, seriously underexposed image, and a seriously overexposed image.

10. (Previously Presented) A device as in claim 9, further comprising a threshold storing element, storing first and second increase and decrease increments, an underexposed or overexposed image being increased or decreased, respectively by said first increment, and the seriously underexposed or overexposed image being increased or decreased, respectively by said second increment.

11. (Previously Presented) A device as in claim 1, wherein said image sensor includes an active pixel sensor with a plurality of pixels of a CMOS image sensor, each pixel including an in-pixel buffer transistor and an in-pixel selection transistor.

12. (Previously Presented) A device as in claim 1, wherein said desired thresholds comprise a first threshold for a seriously deficient image and a second threshold for a less seriously deficient image, said first and second thresholds collectively adding up to more than 100%.

13. (Original) A device as in claim 1, wherein said exposure is one of a shutter width or a gain of the image sensor.

14. (Currently Amended) An automatic exposure adjusting image sensor device, comprising:

an image sensor, including a plurality of adjustable photoreceptors, each photoreceptor defining a pixel of the image, and said image sensor having an adjustable exposure which when increased, increases an amount of exposure for a next frame of the image, and when decreased, decreases an amount of exposure for a next frame of the image;

an analog to digital converter which obtains an analog output from said image sensor and produces a digital output indicative of said analog output to thereby produce a plurality of digital outputs for said plurality of pixels;

a pixel characterization element, representing certain most significant bits of at least a plurality of said digital outputs, to thereby characterize said pixel according to its exposure characteristic;

a counter element, which counts numbers of pixels characterized by said pixel characterization element and compares said count with certain thresholds; and

an image adjusting element, for adjusting said exposure based on said count.

15. (Original) A device as in claim 14, further comprising a memory storing said thresholds, and said memory is variable to change said thresholds.

16. (Currently Amended) A method of automatically determining exposure control for an image sensor comprising:

obtaining a plurality of digital values, said plurality of digital values representing values of pixels of said image sensor;

setting a first variable threshold for overexposed pixels;

setting a second variable threshold for underexposed pixels;

characterizing said digital values by obtaining only a number of most significant bits of said pixels and not all bits of said pixels and investigating said most significant bits to determine if they represent overexposed pixels, normally-exposed pixels or underexposed pixels;

counting said characterized digital values; and

if the number of overexposed pixels is greater than said first threshold, then decreasing an exposure for a next frame and if the number of under exposed pixels is greater than said second threshold then increasing the exposure for the next frame.

17. (Canceled).

18. (Previously Presented) A method as in claim 16, wherein characterizing a digital value as an over exposed pixel is determining that the two most significant bits are "11".

19. (Previously Presented) A method as in claim 18, wherein characterizing a digital value as an under exposed pixel is determining that at least one most significant bit is zero.

20. (Previously presented) A method as in claim 16, further comprising detecting seriously overexposed and underexposed pixels as well as moderately overexposed and moderately underexposed pixels.

21. (Previously Presented) A method as in claim 20, wherein said increasing and decreasing an exposure comprises changing the exposure by one amount for seriously overexposed or underexposed pixels and changing the exposure by another amount for moderately underexposed or overexposed pixels.

22. (Previously Presented) A method as in claim 18, wherein said first threshold is initially set at about 30% of the total number of the pixels of said image sensor.

23. (Previously Presented) A method as in claim 19, wherein said second threshold is initially set at about 75% of the total number of the pixels of said image sensor.